Before The
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In The Matter Of	)	
Service Rules for Advanced Wireless Services in the 1915-1920 MHz, 1995-2000 MHz, 2020-2025 MHz and 2175-2180 MHz Bands	)	WT Docket No. 04-356
Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands	)	WT Docket No. 02-353

To: The Commission

COMMENTS OF QUALCOMM INCORPORATED

QUALCOMM Incorporated ("QUALCOMM") hereby submits its Comments on the Notice of Proposed Rule Making, FCC 04-218, released September 24, 2004 ("NPRM"), in which the Commission sought comment on service rules for licensed fixed and mobile services, including advanced wireless services, in the 1915-1920 MHz/1995-2000 MHz and 2020-2025/2175-2180 MHz bands. See NPRM at para. 1. QUALCOMM submits these comments to highlight one issue that the Commission should address in devising technical rules for the so-called H Block, 1915-1920/1995-2000 MHz, which is not discussed in the NPRM to protect PCS mobiles from suffering harmful interference in the PCS mobile receive band, namely intermodulation interference.

In paragraph 27 of the Order in which the Commission allocated the H Block for fixed and mobile services, the Commission recognized, based on a test report filed by Sprint, that PCS mobiles, operating in the mobile receive band, could suffer receiver overload from a nearby transmitting H Block jammer, but the Commission concluded that limiting the power of H block

mobiles to 200 mW (23 dBm) would ensure that overload would not occur if a H block jammer was one meter or more away from the victim PCS phone. See Sixth Report and Order, Third Memorandum Opinion and Order, and Fifth Memorandum Opinion and Order, Dockets ET 00-258, RM-9498, RM-10024, ET 95-18, FCC 04-219, released Sept. 22, 2004 ("H Block Order") at para. 27.[1] Accordingly, in the NPRM, the Commission sought comment on a proposal to limit the power of handsets transmitting at 1915-1920 MHz to 200 mW, which the NPRM said "should be sufficient to adequately address concerns about overload interference to nearby PCS handsets." NPRM at para. 107.

The NPRM fails to consider a more severe interference problem from mobiles transmitting on the H Block, namely intermodulation interference suffered by mobiles on the B Block from H Block jammers. The precise susceptibility of any particular phone model to intermodulation interference will vary based on phone design (since there is no specification that applies exactly to this condition), but QUALCOMM believes the susceptibility of CDMA mobiles to intermodulation interference to be about 10 dB worse than their susceptibility to overload. This intermodulation condition is at its worst when the CDMA mobile is transmitting at or near maximum power, which is exactly what is expected when the receiver is operating near threshold.

Since issuance of the NPRM, QUALCOMM understands that CTIA has commissioned a series of tests, the results of which we understand are being filed with the Commission in this proceeding. Unlike the tests previously conducted by Sprint, the CTIA-commissioned tests included additional tests designed to measure intermodulation interference. Specifically, the

[1] The Commission went on to note that for the worst phone tested by Sprint, the required separation would increase to 1.5 meters. H Block Order at para. 27.

CTIA tested with an H block mobile transmission that would produce 2f1-f2 intermodulation effects on a PCS B Block victim channel. QUALCOMM further understands that CTIA is submitting the results of these tests of intermodulation interference with their Comments.[2]

QUALCOMM believes that the Commission should adopt technical rules to address this more severe interference issue. PCS mobiles operating on the B Block deserve protection from intermodulation interference just as PCS mobiles on the A block deserve protection from overload. The Commission should protect all the PCS bands from interference and not leave any band more or less subject to interference.

Respectfully submitted,

By: /s/Dean R. Brenner

Dean R. Brenner
Senior Director, Government Affairs
QUALCOMM Incorporated
2001 Pennsylvania Ave., N.W.
Suite 650
Washington, D.C. 20006
(202) 263-0020
Attorney for QUALCOMM Incorporated

Dated: December 8, 2004

[2] In assessing both overload and intermodulation interference, the Commission should bear in mind that the receive sensitivity of typical CDMA PCS mobiles ranges from -110 dBm to -108 dBm. CDMA PCS mobiles are considerably more sensitive than as is required in the specification in IS-98—IS-98 requires that CDMA PCS mobiles pass a test to show merely that they receive at -104 dBm.